References

Joseph, A. (1968): Studies on the Passalids (Coleoptera) of Kerala. I. Biology of *P. brachyphyllus* Stol. *J. Bombay nat. Hist. Soc.* **65**: 505-508.

Gravely, F. H. (1915): Notes on the habits of Indian Insects, Myriapods and Arachnida. *Rec. Indian Mus.* **11**: 495-496.

20. BORING ORGANISMS OF THE GREAT NICOBAR ISLAND. MOLLUSCA: TEREDINIDAE[1]

Introduction

The wood borers of the family Teredinidae are chiefly marine and a few of these have been known to occur in brackish water environment also. Some species are found only in brackish water as is the case with most *Nausitora* (Turner 1966). This genus is restricted to tropical and subtropical waters, i.e. Indo-Pacific, Eastern Pacific and Western Atlantic. Altogether, five species are considered valid in this genus by Turner (1966). Of these, *N. dunlopei* was first recorded by Wright (1864) from fresh water below Fureedpore, Comer river, a branch of the Hureegonga which is itself a branch of the Ganges which flows past the towns of Rampore and Pabna. As pointed out by Turner (1966) test-board studies have shown that *N. dunlopei* and *Teredo poculifer* Iredale shift up and down the Brisbane river with changes in salinity. A collection of *Nausitora dunlopei* Wright was made by one of us (A.D.) during the Great Nicobar Expedition from infested dead trees at a place about 25 km up Galathea river in an almost freshwater environment. It was observed to have caused considerable destruction of submerged timber structures in this region.

In the present paper the synonymies, geographical distribution and remarks on the adaptability of this species to environmental salinity changes are dealt with.

Nausitora dunlopei Wright, 1864

1864. *Nausitora dunlopei* Wright: *Trans. Linn. Soc., London* **24**: 453, pl. 46, figs. 1-12
1898. *Calobates fluviatilis*, Hedley: *Proc. Linn. Soc. N.S.W.* **23**: 93, figs. 1-6.
1927. *Bankia* (*Nausitora*) *smithi*, Bartsch: *J. Siam. Soc. nat. Hist. Suppl.* **7** (1): 61, pl. 6, figs. 1, 6-8, 10, 12.

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[1] This paper was presented at the 'Seminar on the achievements of the Scientific Expedition to the Great Nicobar Island' organized by the National Institute of Sciences of India at Varanasi on 2nd January, 1968.

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1928. *Bankia triangularis*, Sivickis : *Philippine Jour. Sci., Manila* 37 : 286, pl. 1, fig. 1.
1928. *Bankia quadrangularis*, Sivickis ; *Philippine Jour. Sci., Manila* **37** : 287, pl. 1, fig. 3.
1928. *Bankia globosa*, Sivickis : *Philippine Jour. Sci., Manila* **37** : 288, pl. 1, fig. 5.
1932. *Nausitora messeli*, Iredale : *Destruction of timber by marine organisms in the port of Sydney, Sydney Harbour Trust, Sydney*, p. 37, pl. 4, figs. 9-12.
1935. *Nausitora schneideri*, Moll : *Sitz., Akad. Wiss. Wien* **144** : 271, pl. 2, fig. 1.
1935. *Nausitora madagassica*, Roch : *Sitz., Akad. Wiss. Wien* **144** : 271, pl. 2, fig. 2.
1935. *Bankia pennamseris*, Roch : *Sitz., Akad. Wiss. Wien* **144** : 274, pl. 2, fig. 4.
1936. *Nausitora queenslandica*, Iredale : *Queensland Forest Service Bull.*, No. 12, p. 37, pl. 2, figs. 8-14.
1954. *Bankia (Nausitora) madrasensis*, Nair : *Rec. Indian. Mus., Delhi* **52** : 399, figs. 5a-d (1956).

In the above synonymy we have followed Turner (1966) completely with the solitary exception of *N. lanceolata* Rajagopal (1964) since we feel that this species is more closely allied to *N. hedleyi* Schepman which she also considers a valid species.

Material : In addition to the specimens examined *in situ* in the field, preserved specimens were brought back to Calcutta: 2 exs., Sta. 8-25 km up Galathea river, Great Nicobar Island, Coll. No. 698, 27.iii.1966.

Distribution : INDIAN PENINSULA: Fureedpore, Comer river a branch of the Hurreegonga, a branch of the Ganges; Madras-Royapuram; SIAM: Chao Phya river at Bangsorn; PHILIPPINES: Cebu, Dalahican; Cavite, Luzon, Sir J. Brooke Point, Palawan; BISMARCK ARCHIPELAGO: Karlei, Neupommern; FIJI ISLANDS: Rewa and Navua rivers, Viti Levu; AUSTRALIA: Queensland; Chelmer, upper Brisbane river, New South Wales: Port Jackson and Gattai Creek, Hawkesbury river drainage; MADAGASCAR: Port Choisel, Maroantsetra; Vintano auf Sainte-Marie.

This species is restricted to the Indo-Pacific region. In the Indian Ocean it is confined to the tropical limits. However in the Pacific, it extends up to 34°S. lat.

Remarks : The preserved specimens under examination are not full grown, the larger one measuring 27 mm in length.

This is the first record of any Teredinid borer from the Nicobars.

From the locality records of this species (vide supra-synonymy) it is evident that it occurs in fresh, brackish water and marine environments which suggest that it can thrive well under all conditions of salinity dilutions. Further, studies in tolerance of *N. hedleyi* Schepman (Cheriyan 1966) lends support to the view that species of the genus *Nausitora* generally are similarly capable of tolerating wide

variations in salinity. It is therefore suggested that this adaptability to such salinity variations in the case of *N. dunlopei* Wright also be taken into consideration and suitable wood preservatives be used while constructing jetties, floating fenders and other submerged timber structures in all types of environments in the Nicobar Islands.

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REFERENCES

CHERIYAN, P. U. (1965) : Studies on the salinity tolerance of *Nausitora hedleyi* Schepman. *J. Timber Development Assoc. India* **12** (4) : 7-10.

RAJAGOPAL, A. S. (1964) : Two new species of marine borers of the genus *Nausitora* (Mollusca : Teredinidae) from West Bengal, India. *J. Bombay nat. Hist. Soc.* **61** : 108-118.

TURNER, R. D. (1966) : A survey and illustrated catalogue of the Teredinidae (Mollusca : Bivalvia) ; 10 unnumbered pp. + 265 pp. — Cambridge, Massachusetts (Museum of Comparative Zoology, Harvard University).

WRIGHT, E. P. (1864) : On a new genus of Teredinidae. *Trans. Linn. Soc. London* **24** : 451-454, pl. 1.

21. ON THE NEED FOR CONSERVATION OF THE CAVERNICOLOUS SHRIMP, *MACROBRACHIUM CAVERNICOLA* (KEMP) OF THE SIJU CAVE, GARO HILLS (MEGHALAYA)

Siju Cave is the largest cave that we have in our country. Moreover this is the only cave in India the fauna of which is sufficiently known. S. W. Kemp and B. N. Chopra made a pioneer exploration of the cave dwelling fauna of the Siju Cave in 1922 and their findings were published in the form of a series of papers in the *Records of the Indian Museum* (1924) **26**. Subsequent to this two more parties from the Zoological Survey of India have made faunistic collections from this cave, the first led by Shri A. S. Rajagopal in 1965 and the second by Dr. G. M. Yazdani in 1971. The junior author was with both these parties.

Macrobrachium cavernicola lives in the side pools and stream that flows through the cave and is restricted to the inner parts, from 166 to